ABSTRACT

Ore reserves of copper and gold ore PT. Freeport Indonesia (PTFI) in the Grasberg using the Open Mine (Surface Mine). At the end of 2008 to the present PTFI trying to apply a ARDVARC Drilling System (Rotary Drilling Advance Automatic Radio Control Vector), which is an Infrastructure Drilling Management System that is controlled by the Programme Logic Control (PLC) with the aim of management is to know the drill which is mechanically drill system is capable of detecting damage at an early stage and recommend what should be improved both in good drill or drill in a state of disrepair. While the benefits of the system used to drill for drilling ARDVARC that is able to work automatically so that the results of the work can be seen ARDVARC system accuracy drilling, drilling speed, and what type of material found during drilling activities.

Drilling using a ARDVARC drill consists of two electric, Electric Drill 22 namely (ED22), Elecktric Drill 23 (ED23), and a drill tool which is diesel, Diesel Drill 34 (DD34).

Drilling accuracy of ARDVARC drill assumed by the HA-VA (Accuration Horizontal - Vertical Accuration) in order to determine the performance of the ARDVARC drill, while the drilling speed ARDVARC drill assumed by the IPR (Instantaneous Penetration Rate). The assumption of accuracy and speed of drilling is used also as a good or bad appraisers GPS conditions at the time of drilling activity took place. HA-VA values that exist in the data said to be accurate if the HA <30 cm and VA <50 cm, otherwise said to be inaccurate if the HA> 30 cm and the value of VA> 50 cm. DD34 working day in October 2009 = 27 days, the month of November 2009 = 27 days, in December 2009 = 27 days, many working days in October 2009 ED22 = 24 days, in the month of November 2009 = 23 days, in December 2009 = 25 days, and days in October 2009 ED23 = 22 days, in the month of November 2009 = 22 days, and in December 2009 = 26 days.

Drilling with a ARDVARC drill unable to work as normal days but can be said to be optimal. This is because the ability to ARDVARC drill do more drilling are at intervals of 80% - 90% and even reach the interval of > 95%, so it is said to be good and quite optimal. The drilling results that are at intervals of 65% - 80% said that was not so good and not so bad, while drilling result of ARDVARC drill located at intervals of 50% - 65% even up to <50% said poor or nonoptimal. Interval used is PTFI interval to assess that whether or not ARDVARC drill optimal in achieving production targets.

The lack of optimal drilling by ARDVARC drill caused by two factors, mechanical factors and equipment factors that condition the signal received by the ARDVARC drill.